

			-7 HEX HEAD CAP SCREW (QTY. 1)			-9 WASHER		-11 NUT	
BEARING #	TOOL #	BRG. ID.	SCREW SIZE	SHANK LENGTH	MAT.	QTY.	TYPE	QTY.	TYPE
MS14103-5	RBIR4103-5	.3125	5/16-18 UNC x 3-1/4	3/4 or less	GR. 8	1	Ø5/16 ID. MACH.	1	5/16-18 UNC SW. FLG. NUT MCMaster-CAR #90477A030
MS14103-6	RBIR4103-6	.375	3/8-16 UNC x 3-1/4	3/4 or less		1	Ø3/8 ID. MACH.	1	3/8-16 UNC SW. FLG. NUT MCMaster-CAR #90477A031
MS14101-7	RBIR4101-7	.438	7/16-14 UNC x 3-1/4	3/4 or less		2	Ø7/16 ID. MACH.	1	7/16-14 UNC GRADE 8
MS14103-7	RBIR4103-7	.438	7/16-14 UNC x 3-1/2	7/8 or less		2	Ø7/16 ID. MACH.	1	7/16-14 UNC GRADE 8
MS14101-8	RBIR4101-8	.500	1/2-13 UNC x 3-1/2	13/16 or less		1	Ø1/2 ID. MACH.	1	1/2-13 UNC SW. FLG. NUT MCMaster-CAR #90477A033
MS14103-8	RBIR4103-8	.500	1/2-13 UNC x 3-3/4	15/16 or less		1	Ø1/2 ID. MACH.	1	1/2-13 UNC SW. FLG. NUT MCMaster-CAR #90477A033
MS14101-9	RBIR4101-9	.563	9/16-12 UNC x 3-1/2	7/8 or less		2	Ø9/16 ID. MACH.	1	9/16-12 UNC GRADE 8
MS14103-9	RBIR4103-9	.563	9/16-12 UNC x 3-3/4	1 or less		2	Ø9/16 ID. MACH.	1	9/16-12 UNC GRADE 8
MS14101-10	RBIR4101-10	.625	5/8-11 UNC x 4	15/16 or less		1	Ø5/8 ID. MACH.	1	5/8-11 UNC SW. FLG. NUT MCMaster-CARR #90477A035
MS14103-10	RBIR4103-10	.625	5/8-11 UNC x 4-1/4	1-1/16 or less		1	Ø5/8 ID. MACH.	1	5/8-11 UNC SW. FLG. NUT MCMaster-CARR #90477A035

RED BARN MACHINE

TITLE PORTABLE BEARING INSTALL & REMOVAL TOOLS

DWG NO. -7 & -9 & -11 FASTENER PARTS

REV 3A

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON:
 DECIMALS .XXX ± .005 FRACTIONS ± 1/32
 .XX ± .01 ANGLES ± 5°
 .X ± .1

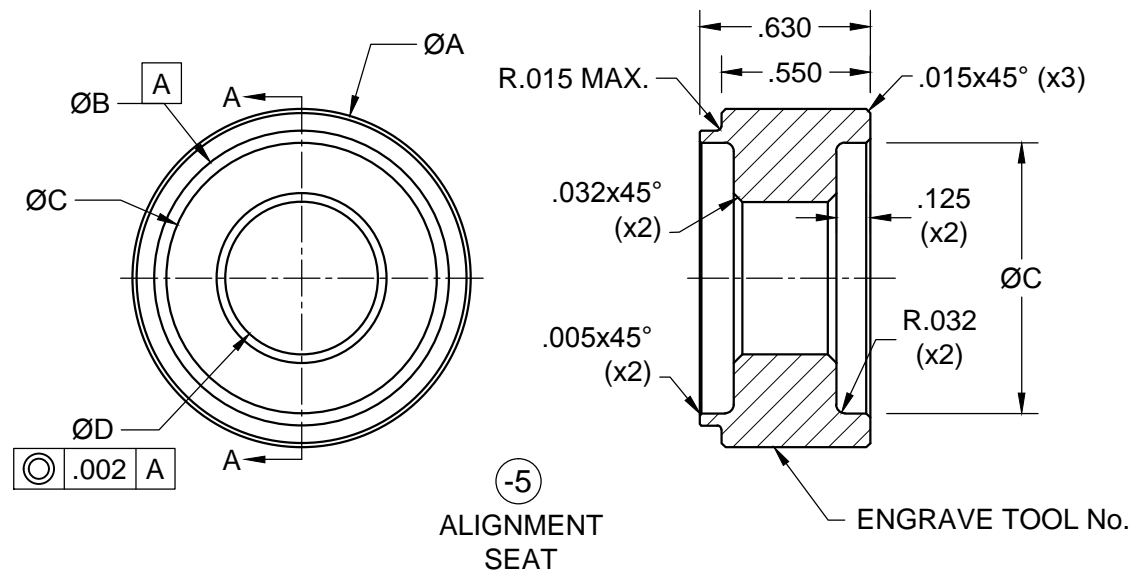
UNLESS OTHERWISE SPECIFIED
 1. BREAK ALL SHARP EDGES
 .015 x 45° PR .015 R
 2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED: *D Weil*
HEAT TREAT:
FINISH SPEC: ALL BLACK OXIDE
 USED ON BEARING

SCALE NTS

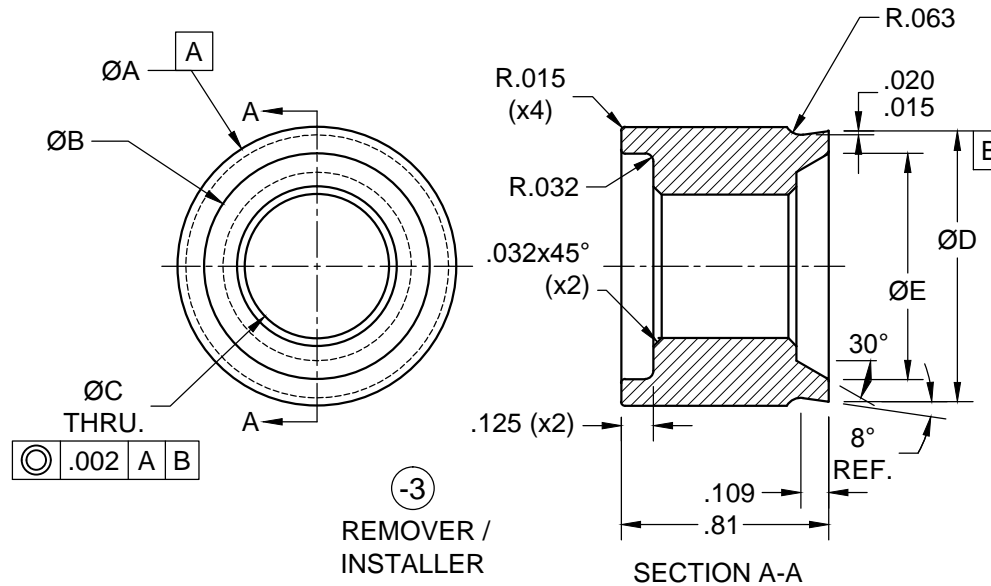
DATE 1-21-08

SHEET 5 of 5



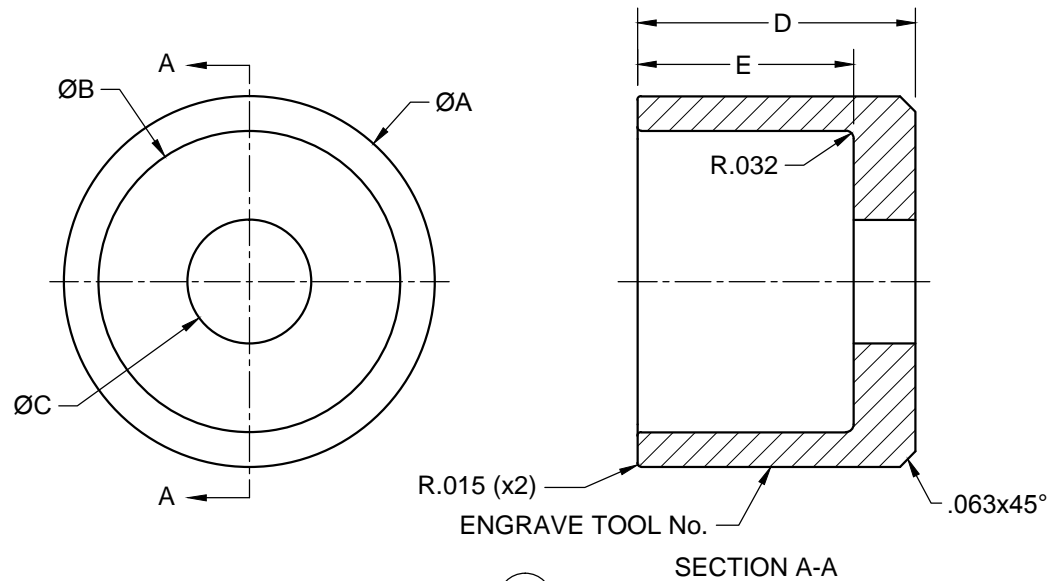
BEARING #	TOOL #	BRG. OD.	ØA + .000 - .010	ØB + .001 - .003	ØC + .000 - .010	ØD + .003 - .000	MATERIAL
MS14103-5	RBIR4103-5	.6875	.938	.680	.585	.313	Ø1 x 7/8 4140 Q&T RND.BAR
MS14103-6	RBIR4103-6	.8125	1.062	.805	.766	.375	Ø1-1/8 x 7/8 4140 Q&T RND.BAR
MS14101-7	RBIR4101-7	.9062	1.156	.898	.672	.438	Ø1-1/4 x 7/8 4140 Q&T RND.BAR
MS14103-7	RBIR4103-7	.9375	1.188	.929	.798	.438	Ø1-1/4 x 7/8 4140 Q&T RND.BAR
MS14101-8	RBIR4101-8	1.000	1.250	.992	.836	.500	Ø1-1/4 x 7/8 4140 Q&T RND.BAR
MS14103-8	RBIR4103-8	1.000	1.250	.992	.860	.500	Ø1-1/4 x 7/8 4140 Q&T RND.BAR
MS14101-9	RBIR4101-9	1.0937	1.344	1.086	.930	.563	Ø1-3/8 x 7/8 4140 Q&T RND.BAR
MS14103-9	RBIR4103-9	1.125	1.375	1.117	.985	.563	Ø1-3/8 x 7/8 4140 Q&T RND.BAR
MS14101-10	RBIR4101-10	1.1875	1.438	1.179	1.023	.626	Ø1-1/2 x 7/8 4140 Q&T RND.BAR
MS14103-10	RBIR4103-10	1.1875	1.438	1.179	1.047	.626	Ø1-1/2 x 7/8 4140 Q&T RND.BAR

RED BARN MACHINE	
TITLE PORTABLE BEARING INSTALL & REMOVAL TOOLS	
DWG NO. -5 ALIGNMENT SEAT	REV 3A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	DRAWN BY: PERRITT APPROVED <i>D Weil</i> HEAT TREAT FINISH BLACK OXIDE SPEC USED ON BEARING SEE CHART
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 1-21-08 SHEET 4 of 5



BEARING #	TOOL #	BRG. OD.	ØA +.000 -.004	ØB +.005 -.005	ØC +.003 -.000	ØD +.003 -.003	ØE +.003 -.003	MATERIAL
MS14103-5	RBIR4103-5	.6875	.679	.595	.313	.648	.555	Ø3/4 x 1 4140 Q&T RND.BAR
MS14103-6	RBIR4103-6	.8125	.804	.675	.375	.766	.635	Ø7/8 x 1 4140 Q&T RND.BAR
MS14101-7	RBIR4101-7	.9062	.898	.766	.438	.866	.726	Ø1 x 1 4140 Q&T RND.BAR
MS14103-7	RBIR4103-7	.9375	.929	.797	.438	.898	.757	Ø1 x 1 4140 Q&T RND.BAR
MS14101-8	RBIR4101-8	1.000	.992	.836	.500	.960	.796	Ø1 x 1 4140 Q&T RND.BAR
MS14103-8	RBIR4103-8	1.000	.992	.860	.500	.960	.820	Ø1 x 1 4140 Q&T RND.BAR
MS14101-9	RBIR4101-9	1.0937	1.086	.930	.563	1.055	.890	Ø1-1/8 x 1 4140 Q&T RND.BAR
MS14103-9	RBIR4103-9	1.125	1.117	.985	.563	1.085	.945	Ø1-1/8 x 1 4140 Q&T RND.BAR
MS14101-10	RBIR4101-10	1.1875	1.179	1.023	.625	1.148	.983	Ø1-1/4 x 1 4140 Q&T RND.BAR
MS14103-10	RBIR4103-10	1.1875	1.179	1.047	.625	1.148	1.007	Ø1-1/4 x 1 4140 Q&T RND.BAR

RED BARN MACHINE	
TITLE PORTABLE BEARING INSTALL & REMOVAL TOOLS	
DWG NO. -3 REMOVER / INSTALLER	REV 3A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	DRAWN BY: PERRITT APPROVED: <i>D Weil</i> HEAT TREAT FINISH BLACK OXIDE SPEC USED ON BEARING
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	SEE CHART
SCALE NTS	DATE 1-21-08 SHEET 3 of 5



-1


RECEIVER

BEARING #	TOOL #	ØA +.010 -.010	ØB +.005 -.005	ØC +.005 -.000	D +.010 -.010	E +.010 -.010	MATERIAL
MS14103-5	RBIR4103-5	1.250	.788	.313	.875	.625	Ø1-1/4 x 1 1018 RND. BAR
MS14103-6	RBIR4103-6	1.375	.913	.375	.875	.625	Ø1-3/8 x 1 1018 RND. BAR
MS14101-7	RBIR4101-7	1.375	1.000	.438	.875	.625	Ø1-3/8 x 1 1018 RND. BAR
MS14103-7	RBIR4103-7	1.375	1.038	.438	1.000	.750	Ø1-3/8 x 1-1/8 1018 RND. BAR
MS14101-8	RBIR4101-8	1.475	1.100	.500	.938	.688	Ø1-1/2 x 1-1/16 1018 RND. BAR
MS14103-8	RBIR4103-8	1.475	1.100	.500	1.063	.813	Ø1-1/2 x 1-3/16 1018 RND. BAR
MS14101-9	RBIR4101-9	1.563	1.188	.563	1.000	.750	Ø1-5/8x 1-1/8 1018 RND. BAR
MS14103-9	RBIR4103-9	1.600	1.225	.563	1.125	.875	Ø1-5/8x 1-1/4 1018 RND. BAR
MS14101-10	RBIR4101-10	1.663	1.288	.625	1.063	.813	Ø1-3/4 x 1-3/16 1018 RND. BAR
MS14103-10	RBIR4103-10	1.663	1.288	.625	1.188	.938	Ø1-3/4 x 1-5/16 1018 RND. BAR

RED BARN MACHINE			
TITLE PORTABLE BEARING INSTALL & REMOVAL TOOLS			
DWG NO. -1 RECEIVER			REV 3A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		DRAWN BY: PERRITT APPROVED: <i>D Weil</i> HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE CHART	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE NTS	DATE 1-21-08	SHEET 2 of 5	

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	ADDED ALL THE MISSING INFORMATION TO COMPLETE TOOLS NAMED. ADDED BOLT & NUT DRAWING & CORRECTED -1 INFORMATION.	9/12/08	WP	
2	ADDED TOOL KIR4103-5. ALSO REMOVED ENGRAVING FROM -3.	12-9-08	WP	
3	ADDED TOOL IR4103-6 FOR BEARINGS MS4101-6 & MS4103-6. ALSO ADDED DIM ØE TO PART -3 REMOVER, WAS ØB.	2/24/09	WP	
3A	CH'D T/N WAS KIR*** IS RBIR***. ALL TOOLS ALL SHEETS.	3/19/13	BIM	RW

BEARING #	BEARING #	TOOL #
	MS14103-5	RBIR4103-5
MS14101-6	MS14103-6	RBIR4103-6
	MS14101-7	RBIR4101-7
206-031-594-001&-003	MS14103-7	RBIR4103-7
	MS14101-8	RBIR4101-8
	MS14103-8	RBIR4103-8
	MS14101-9	RBIR4101-9
	MS14103-9	RBIR4103-9
	MS14101-10	RBIR4101-10
	MS14103-10	RBIR4103-10

 RED BARN MACHINE			
TITLE		PORTABLE BEARING INSTALL & REMOVAL TOOLS	
DWG NO. SEE CHART FOR TOOL No.			REV 3A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1 FRACTIONS ± 1/32 ANGLES ± 5°		DRAWN BY: PERRITT APPROVED <i>D Weid</i> HEAT TREAT FINISH SPEC BLACK OXIDE	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		USED ON BEARING SEE CHART	
SCALE	NTS	DATE	1-21-08
		SHEET	1 of 5

NOT APPROVED FOR PRODUCTION



RED BARN MACHINE

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

DRAWN BY: PERRITT	<div>RB</div> RED BARN MACHINE		
CHECKED	TITLE		
HEAT TREAT FINISH SPEC	TITLE		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	FRACTIONS ± 1/32 ANGLES ± .5°		REV.
USED ON MODEL ?	DWG NO. PART #		
	SCALE NTS	DATE 1-28-06	SHEET 1 of 1
	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		